

UNCLASSIFIED

AD NUMBER
AD401008
NEW LIMITATION CHANGE
TO Approved for public release, distribution unlimited
FROM Distribution authorized to U.S. Gov't. agencies and their contractors; Administrative/Operational Use; DEC 1962. Other requests shall be referred to US Library of Congress, Attn: Aerospace Technology Division, Washington, DC.
AUTHORITY
ATD ltr, 2 Dec 1965

THIS PAGE IS UNCLASSIFIED

UNCLASSIFIED

AD

401 008

DEFENSE DOCUMENTATION CENTER

FOR

SCIENTIFIC AND TECHNICAL INFORMATION

CAMERON STATION, ALEXANDRIA, VIRGINIA



UNCLASSIFIED

NOTICE: When government or other drawings, specifications or other data are used for any purpose other than in connection with a definitely related government procurement operation, the U. S. Government thereby incurs no responsibility, nor any obligation whatsoever; and the fact that the Government may have formulated, furnished, or in any way supplied the said drawings, specifications, or other data is not to be regarded by implication or otherwise as in any manner licensing the holder or any other person or corporation, or conveying any rights or permission to manufacture, use or sell any patented invention that may in any way be related thereto.

401008

S/192/62/003/006/003/004
D228/D307

STEP

AUTHORS: ④ Karyakin, A.V. and Volynets, M.P.

TITLE: ⑥ Infrared spectra of the carbonate complex of thorium

PERIODICAL: ⑤ Zhurnal strukturnoy khimii, v. 3, no. 6, 1962, 714-716

TEXT: The aim of the research was to demonstrate the participation of CO_3^{2-} ions in the coordination bond of $\text{Na}_4[\text{Th}(\text{CO}_3)_4] \cdot \text{Na}_2\text{CO}_3 \cdot 12\text{H}_2\text{O}$ and the presence of free CO_3^{2-} in the outer sphere of this complex. Measurements were made on a UR-10 spectrophotometer on wavelengths of 400 to 4000 cm^{-1} . Data for the hydrated complex show that the frequencies of CO_3^{2-} absorption bands coincide quite well with those for the complex $[\text{Co}(\text{NH}_4)_4\text{CO}_3]$. Besides absorption bands, relating to CO_3^{2-} ions in the inner sphere of the complex, there are others with frequencies of 870 and 1070 cm^{-1} , possibly relating to the absorption of hydrated CO_3^{2-} present in the outer sphere. This is confirmed by appearance of certain absorption bands

Card 1/2

Infrared spectra ...

S/192/62/003/006/003/004
D228/D307

in the infrared spectrum of the dehydrated complex. These bands have frequencies of 700-705 and 855 cm^{-1} and are characteristic and anhydrous Na_2CO_3 . There are 2 tables and 1 figure.

ASSOCIATION: Institut geokhimii i analiticheskoy khimii im. V.I. Vernadskogo (Institute of Geochemistry and Analytical Chemistry im. V.I. Vernadskiy)

SUBMITTED: July 20, 1962

Card 2/2